

## **FUTURE FISHERIES IMPROVEMENT PROGRAM**

### **FWP RECOMMENDATIONS TO THE FUTURE FISHERIES REVIEW PANEL WINTER 2013**

1. California Creek (Deer Lodge County), located in the Big Hole drainage within the Mount Haggin Wildlife Management Area south of Anaconda, supports a mixed assemblage of salmonids and is a headwater tributary to Deep Creek, which supports fluvial Arctic grayling. Past mining, fallout from the old Anaconda Smelter and grazing management have significantly degraded the stream. Smelter fallout has contaminated soils in a portion of the drainage, resulting in the lack of vegetation and the formation of very unstable rills and gullies. These gullies chronically deposit large sediment plumes into lower portions of the stream. Current land management practices have improved overall riparian and hill slope conditions, but steeper south facing slopes have been very slow to heal. This project calls for undertaking re-vegetation and erosion control work on one small unnamed tributary to California Creek, as a pilot project. The project plans to create a series of 10 islands of planted grasses, trees and shrubs. Exclosures would be installed around each island to protect the new vegetation from browsing. The major rills and gullies would be treated by hand excavating channel morphology to more of a U-shape and by installing small in-channel sediment basins. Additionally, the project calls for hand-excavating a series of small basins placed perpendicular to the slope of the drainage to overland flow and sediment. The applicant is requesting \$26,000 in Program funds and is contributed \$20,000 in cash from outside sources. Although the risk of project failure likely is fairly high due to the substantial difficulty of stabilizing gullies, we support the project as proposed (\$26,000).

2. Dry Fork of Belt Creek (Cascade County) is a tributary to Belt Creek located near the town of Monarch with a long history of mining activity. Mining has rendered segments of the Dry Fork uninhabitable for fish and other aquatic life. However, portions of the headwaters continue to support remnant populations of nearly genetically pure westslope cutthroat trout. These isolated populations of cutthroat trout have essentially been protected from invasion by non-native fish as a result of these highly contaminated segments acting as fish passage barriers. Recently, a negotiated settlement was reached with responsible parties to conduct mine waste clean-up in the drainage. The improvement in water quality in the stream, as a result of these ongoing clean-up efforts, has an unwanted side effect of increasing the risk of invasion by non-native fish into the headwaters where cutthroat trout reside. This project calls for the installation of a fish passage barrier approximately 2 miles upstream from the mouth to prevent the invasion by non-native fishes as the drainage is reclaimed from past mining. The applicant is requesting \$10,000 in Program funds and is contributing \$144,200 in cash from outside sources towards completion of the project. We support the project as proposed. (\$10,000) RIT eligible.

3. Harvey Creek (Granite County) is a tributary to the Clark Fork River located near the town of Drummond that supports genetically pure westslope cutthroat trout and bull trout. There presently are eight irrigation diversions on Harvey Creek, including seven ditches on the Harvey Creek Ranch

and one on the Weaver Ranch. All of the diversions are considered sources of fish entrainment. This project would be a first phase in eliminating sources of entrainment from all of the Harvey Creek diversions. The project would eliminate entrainment into the uppermost diversion by replacing a push-up irrigation dam with a more permanent rock cross vane that would provide for year round fish passage. The new diversion would include a head gate, flow measuring device and fish screen. In addition to modifying the diversion, the project would complete riparian fencing on the Harvey Creek Ranch to protect over 2.5 miles of the stream. Future Fisheries previously funded riparian fencing on the Harvey Creek Ranch on the east side of the stream. The applicant is requesting \$17,726 in Program funds and is contributing \$34,727 in cash from outside sources and \$10,000 in in-kind services. We support the project as proposed, minus the \$800 budgeted for post project monitoring (the Program does not fund monitoring) and the 80 hours (\$1,600) for oversight. (Reduce to \$15,326) RIT eligible.

4. Kennedy Creek (Missoula County) is a tributary to Ninemile Creek that supports a mixed fish assemblage. The headwaters support genetically pure westslope cutthroat trout. Due to past mining activity, segments of Kennedy Creek in the vicinity of the Cabin and Nugget mine sites were significantly altered and routed to the southern side of the narrow valley. Waste rock, in direct contact with the channel, currently is actively eroding into the stream and hindering water quality. This project calls for removing waste rock materials from the floodplain and reconstructing about 1,000 feet of stream channel. This project is being completed under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) in a cooperative effort between the US Forest Service, Missoula County and Trout Unlimited. The applicant is requesting \$37,240 in Program funds and is contributing \$288,802 in cash from outside sources and \$7,243 in in-kind services towards completion of the project. We support the project as proposed (\$37,240). RIT eligible.

5. Klondike Creek (Lewis and Clark County) is a tributary to Beaver Creek and ultimately the Blackfoot River located near the town of Lincoln that supports genetically pure westslope cutthroat trout. An existing road culvert on the stream is undersized, acts as a seasonal upstream migration barrier and is causing impairments to the stream channel. This project calls for replacing the existing undersized culvert with a concrete bridge set on concrete footings. The applicant is requesting \$26,000 in Program funds and is contributing \$128,902.50 in cash from outside sources and \$4,800 in in-kind services. We support the project as proposed (\$26,000). RIT eligible.

6. Lost Creek (Deer Lodge County) is a tributary to the Clark Fork River located near the community of Galen that supports primarily brown trout. Chronic dewatering, elevated summer water temperatures and fish passage and entrainment issues currently constrain the fishery. The Beckstead ditch, located on the Lampert Ranch between the interstate and the confluence with the Clark Fork River, essentially dewateres Lost Creek during late summer irrigation. Approximately 1 mile of Lost Creek down to the confluence is degraded by this diversion. This project calls for entering into a 2-year pilot diversion reduction agreement. The hope is that this pilot project will lead to a long-term in-stream flow lease. The project proposes to pay the Lampert Ranch \$3,000 per year for two years for forgone production on 160 acres of irrigated pasture. The ditch head gate would be closed on July 5 each year and all remaining flow would be kept in-stream. The applicant is requesting \$8,000 in Program funds and is contributing \$8,050 in in-kind services. Flow data from 2012 indicates stream flow was less than the amount being claimed for salvage from mid-June

through early September. FWP water rights personnel feel only a maximum of 0.76 cfs would be protectable in a water lease (based on consumptive use). Additionally, we wonder why NRD funds or other matching funds aren't available for this project. Despite these concerns, we support the project, minus the \$2,000 requested for monitoring (the Program does not fund monitoring) (Reduced to \$6,000).

7. Lost Horse Creek (Ravalli County) is a tributary to the Bitterroot River located south of the town of Darby that supports a mixed salmonid assemblage, including bull trout and westslope cutthroat trout. Presently, the Ward irrigation canal carries water diverted from the Bitterroot River across Lost Horse Creek by merging canal flow with creek flow via a gravel push-up dam. This practice dewateres the lower reach of Lost Horse Creek, blocks upstream fish migration and entrains fish into the irrigation ditch. A university researcher identified the Ward canal as the largest source of entrainment in Lost Horse Creek. This project calls for installing a siphon underneath Lost Horse Creek to convey water diverted from the Bitterroot River down the Ward canal. The siphon would eliminate the need for constructing the seasonal in-channel dam, eliminate the presence of a seasonal migration barrier and reduce a source of fish entrainment. Additionally, the irrigation district, which also has a water right on the stream, has agreed to enter into a formal minimum flow agreement to pass all flow less than 10 cubic feet per second to the Bitterroot River. The applicant is requesting \$100,000 in Program funds and is contributing \$214,565 in cash from outside sources and \$4,000 in in-kind services. We have a concern over how upstream water users will behave if this lower ditch is shut down. There is a possibility that upstream water users will simply divert more water since it is not being used at the lower diversion. We also oppose the \$3,500 budgeted for monitoring and the \$3,000 in project coordination. Despite these concerns, we support the project, minus the \$6,500 in monitoring (the Program does not fund monitoring) and coordination (Reduce to \$93,500). RIT eligible.

8. McVey Creek (Beaverhead County) is a tributary to the Big Hole River located near Wisdom that was the site of a recent effort to re-establish a genetically pure population of westslope cutthroat trout. Current grazing management on private and state land properties appears to be improving riparian conditions along the stream, with the exception of several reaches where recovery has been slow. This project calls for installing about 0.5 miles of riparian fencing on a reach located on state land where there is a lack of willow cover. Additionally, the project calls for installing a hardened water gap and replacing an existing road ford with a bridge. The applicant is requesting \$19,100 in Program funds and is contributing \$2,500 in cash from outside sources and \$6,800 in in-kind services. \$2.60/foot for fencing seems high. We also are disappointed by the lack of match from the Department of Natural Resources and Conservation. However, we support the project at a reduced fencing cost of \$2.20/foot (Reduce to \$17,980) RIT eligible.

9. Moose Creek (Silver Bow County) is a tributary to the Big Hole River located near Divide that supports a mixed salmonid fishery. The stream, as it flows through the Moose Creek Ranch, has been degraded from past grazing management practices. The landowner previously has fenced various sections on one side of the stream. This project calls for fencing the remaining portions of a one mile reach of stream that would tie into the existing fence. The landowner also plans to relocate an existing calving pasture away from the stream. Approximately 1.0 mile of fence would be installed. The applicant is requesting \$5,000 in Program funding and is contributing about \$16,626

in cash from outside sources and \$2,500 in in-kind services. We support the project as proposed, contingent upon an approved grazing management plan (\$5,000).

10. Pearson Creek (Powell County) is a small second order tributary to Chamberlain Creek located in the Blackfoot drainage that supports slightly hybridized populations of westslope cutthroat trout, as well as brook trout and long-nose sucker. The stream has been the site of a number of previous restoration activities, including a donated water lease for in-stream flow, 4,000 feet of channel restoration, riparian re-vegetation, and changes to improve grazing management. However, a portion of Pearson Creek, as it flows through the Heart-Bar-Heart Ranch, continues to be impaired. This portion of the stream is straightened and the stream banks have been elevated with the placement of earthen berms. Additionally, an undersized county road culvert acts as a partial barrier to upstream migrating fish. This project calls for reconstructing 1,244 feet of the straightened reach to mimic features of reference reaches, replacing the undersized culvert with a larger concrete box culvert that would span the bank full channel width, transplanting native shrubs and installing about 6,000 willow cuttings, and fencing the riparian corridor. This project previously had been tabled for funding, with a request for more specific design information. The applicant is asking for \$35,000 in Program funds and is contributing \$42,500 in cash and \$16,800 in in-kind services. We support the project as proposed (\$35,000). RIT eligible.

11. Poindexter Slough (Beaverhead County) is a 4.7-mile long channel of the Beaverhead River, located near Dillon, fed by a combination of groundwater and water diverted from the river. The lower 3.2 miles of the channel are located on a FWP fishing access site that supports a very popular fishery for rainbow trout and brown trout. FWP surveys on this slough have documented a steady decline in trout numbers over the last 12 years. This decline has been attributed to impaired riparian conditions and the loss of in-stream habitat, primarily as a result of management of stream flow that has restricted high spring flushing flows. Poindexter Slough was historically fed largely by groundwater from returning flood irrigation. With the change-over to sprinkler systems, flow in the slough needed additional diverted river water in order to meet irrigation demands. This diverted river water deposited significant quantities of fine sediment which progressively has filled pools and inundated riffle habitat. In order to effectively mobilize and transport these fine sediment deposits, this project calls for installing a larger head gate at the top of the slough to provide adequate flushing flows to mobilize sediment deposits. Additionally, the project calls for modifying an existing pin and plank diversion, located in the middle of the slough, to minimize backwater effects. A future second phase would involve selectively narrowing and restoring the channel to further mobilize existing fine sediment deposits. The Future Fisheries Program previously approved \$25,000 toward completion of this project. The applicant is requesting an additional \$63,643 in Program funds and is contributing \$294,634 in cash from outside sources and \$14,455 in in-kind services (previously claimed contributions totaled \$216,645 in cash and \$17,455 in in-kind services, equating to new contributions now totaling about \$74,989). We support the project as proposed but would like to have the applicant specifically identify the level and sources of secured match associated with Phase 1. (\$63,643).

12. Sawpit Creek (Missoula County) is a tributary to upper Ninemile Creek that supports both brook trout and slightly hybridized westslope cutthroat trout. The Sawpit Creek drainage has been historically mined throughout the past century. As a result of this past mining activity, lower portions of the channel have been dredged, leaving the stream confined to a man-made gully. The

most significantly affected reach occurs along about 1,000 feet of channel, where banks are composed of mostly unconsolidated deposits that are devoid of riparian vegetation. The stream then flows into a dredge pond just before its confluence with Ninemile Creek. This project calls for excavating and re-grading about 10,000 cubic yards of mine tailings to create a functional floodplain. Following this earthwork, approximately 1,000 feet of the disturbed channel would be reconstructed using approximately 50 step-pool structures made from rock and log. Stream banks would be formed using coarse cobble placed at the toe and by installing vegetated soil lifts to bank full dimensions. Willow cuttings and containerized woody shrubs would be planted. The project is a partnership between Trout Unlimited, Missoula County and the Lolo National Forest. The applicant is requesting \$31,800 in Program funds and is contributing \$121,690 in cash from outside sources and \$6,400 in in-kind services. We support the project as proposed, minus the \$3,600 budgeted for oversight (Reduce to \$28,200). RIT eligible.

13. The Shields River drainage (Park County), upstream of the Chadbourne diversion, supports significant un-hybridized to slightly hybridized Yellowstone cutthroat trout populations. The Chadbourne diversion is an irrigation structure that spans the Shields River south of Clyde Park. This diversion structure historically has acted as a passage barrier to the upstream invasion of non-native rainbow trout into the upper two thirds of the drainage. Although the diversion is largely impassable to upstream movement by both native and non-native species of fish, some rainbow trout have been able to ascend the structure under certain flow conditions, creating a threat to Yellowstone cutthroat trout populations located upstream. The diversion is currently in disrepair and is subject to potential failure. The loss of this structure would greatly threaten Yellowstone cutthroat trout populations in the drainage, as well as create a significant hardship for the water users associated with the diversion. This project calls for making repairs to the diversion to ensure structural soundness and making retrofits to ensure that the structure acts as a complete barrier to upstream fish passage. This project previously was approved for \$100,004 in Program funding during the summer 2011 funding cycle. However, the scope of the project now has substantially changed. A proposed selective fish ladder will not be installed due to easement issues and, as a result, matching funding from the US Fish and Wildlife Service has been significantly reduced. This application reflects the changes in scope and is now requesting \$126,949 in Program funding and is contributing \$199,550 in cash from outside sources and \$5,000 in in-kind services. The previously approved project has been cancelled. We support the project as proposed (\$126,949). RIT eligible.

14. Skelly Gulch (Lewis and Clark County) is a headwater tributary located in the Tenmile Creek drainage north of the city of Helena that primarily supports brook trout. Skelly Gulch historically was placer mined and much of the drainage has been subdivided for home sites. An existing free span bridge leading to a homeowners association has an adequate span, but is too narrow for larger vehicles, including emergency vehicles. As a result, larger vehicles are currently using a low water ford to cross the stream, leading to some potential water quality issues. This project calls for replacing the narrow bridge with a concrete arch culvert, eliminating the need for a low water ford. The applicant is requesting \$38,606 in Program funding and is contributing \$7,132 in cash from outside sources and \$1,500 in in-kind services. This project appears to be more of a homeowner's association issue than a fisheries habitat issue. We also feel that it would be inappropriate to fund a project that would remove an existing adequately spanned bridge and replace it with what appears to be an undersized culvert. As a result, we recommend that this project be denied (Deny).

15. South Fork Poorman Creek (Lewis and Clark County), a tributary to Poorman Creek located in the upper Blackfoot River drainage, supports populations of genetically pure westslope cutthroat trout and bull trout. Aquatic habitat on the South Fork has been negatively affected by existing road locations and undersized culvert crossings, creating excessive sediment delivery to the stream and hindering upstream fish migration. This project proposes to relocate 2,400 feet of road out of the South Fork Poorman Creek floodplain. The new location would eliminate five stream crossings (four fords and one undersized culvert) and replace them with a single stream crossing located on the West Fork of the South Fork Poorman Creek. The bed and banks located at each of the existing stream crossings that are proposed for abandonment would be restored. The project has been identified as a priority under the Collaborative Forest Landscape Restoration Program by the US Forest Service. The applicant is requesting \$16,000 in Program funds and is contributing \$114,345 in cash from outside sources and \$3,300 in in-kind services. We support the project as proposed (\$16,000) RIT eligible.

16. South Fork Sixteenmile Creek (Gallatin County), located in the north Bridger Range east of the community of Maudlow, currently supports a mixed salmonid fishery. A reach of the South Fork has been identified as a potential site for restoring a native westslope cutthroat trout population. This project calls for installing a fish migration barrier that would result in about 6.5 miles of restored westslope cutthroat trout habitat. A second phase of the project would involve removing the existing non-native fishes using piscicide, followed by a third phase involving the restocking with genetically pure westslope cutthroat trout. The applicant is requesting \$79,752 in Program funding and is contributing \$80,000 in cash from outside sources and \$22,210 in in-kind services. We support the project as proposed (\$79,752) RIT eligible.

17. South Woodward Creek (Lake County), a tributary located in the Swan River drainage, contains important spawning and rearing habitat for the Swan Lake bull trout population and routinely accounts for 30 plus bull trout redds each year. A joint plan for new lands added to the Swan River State Forest, as part of the Montana Legacy Project, identified restoring an existing bridge on South Woodward Creek as a priority to protect the existing bull trout population. The deck of this relatively new bridge is salvageable, but the tall precast wing walls are failing. Should the wing walls fail, a large amount of fine sediment would be delivered into the active channel. The failing wing walls retain about 100 cubic yards of fill for the two bridge approaches. This project calls for removing the existing inappropriate type fill located behind the wing walls, resetting and realigning the existing walls and abutments, and refilling with appropriate material behind the abutments. The applicant is requesting \$30,000 in Program funds and is contributing \$30,000 in cash from outside sources and \$1,462 in in-kind services. We are generally supportive of this project but would like to see a greater contribution come from the Department of Natural Resources and Conservation (DNRC), since the crossing is becoming incorporated into the Swan River State Forest. We recommend reducing the request to \$20,000 and having DNRC (or others) provide an equal level of match. Additionally, we recommend that the Program contribution be limited to construction only, and not be used to pay for oversight (reduce to \$20,000). RIT eligible.